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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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EXAMINER

TREAT, WILLIAM M

| ART UNIT | PAPER NUMBER |
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2183

DATE MAILED: 09/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/973,260

Applicant(s)

WRIGHT ET AL.

Examiner

William M. Treat

Art Unit

2183

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

1. Claims 1-20 are presented for examination.
2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 7, and 9-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Sun et al. (WO 98/19234).
4. Sun taught the invention of claim 1 including an apparatus comprising: a microcontroller (p. 8, line 25 through p. 9, line 2) configured to (i) send or receive data over one or more data lines when in a first mode and (ii) be programmed through said data lines when in a second mode (p. 9, lines 12-21).
5. As to claim 2, Sun taught the apparatus according to claim 1, wherein said microcontroller is further configured to be programmed at a final test stage (p. 11, lines 6-28).
6. As to claim 3, Sun taught the apparatus according to claim 2, wherein said microcontroller is further configured to be re-programmed after said final test stage (p. 11, line 29 through p. 12, line 6).
7. As to claim 7, Sun taught the apparatus according to claim 1, wherein said microcontroller is configured to be reworked (p. 4, lines 3-9).
8. As to claim 9, Sun taught the apparatus according to claim 1, wherein said microcontroller comprises: a communication engine configured to interface with other devices through one or more input pins; a programming interface configured to interface said

Art Unit: 2183

communication engine; and a memory configured to interface with said programmable interface (p. 8, line 25 through p. 11, line 28 and p. 15, line 12 through p. 16, line 15).

9. As to claim 10, it fails to teach or define over rejected claims 1-3, 7, and 9.

10. As to claim 11, it fails to teach or define over rejected claims 1-3, 7, and 9-10.

11. As to claim 12, Sun's system must inherently determine if a programming state is enabled before performing programming in step B; otherwise, his system would not produce predictable and reliable results.

12. As to claims 13 and 14, Sun taught waiting for a programming token as part of programming in step B as well as determining if said programming token is received, to the extent claimed by applicant (p. 11, line 29 through p. 12, line 21).

13. As to claims 15 and 16, Sun taught the method according to claim 14, wherein step (B) further comprises: entering said second mode and the method according to claim 11, wherein said second mode comprises a programmable state (p. 12, lines 22-29).

14. As to claim 17, Sun inherently had a programming method according to claim 11, wherein step (B) is further responsive to a programming voltage because such a programming voltage is necessary to reprogram the Flash EPROM (16 and 17) he is using.

15. As to claim 18, Sun taught the method according to claim 11, wherein said data lines comprise communication lines (p. 12, lines 12-21 and p. 11, lines 9-14).

16. As to claim 19, Sun taught the method according to claim 11, wherein step (B) further comprises: re-programming said microcontroller (p. 6, lines 3-9).

17. As to claim 20, Sun taught the method according to claim 19, wherein step (B) further comprises: programming said microcontroller at a final test stage; and re-programming said microcontroller after said final test stage (p. 11, lines 6-28).

18. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun et al. (WO 98/19234).

19. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

20. As to claim 5, Sun taught the apparatus according to claim 1 is a microcontroller (see paragraph 4, *supra*). He did not specifically teach said microcontroller comprises a universal serial bus microcontroller. However, Sun does teach his system is compatible with the Universal Serial Bus (USB) system (p. 3, lines 17-22). Given Sun's system's compatibility with the USB Bus and protocol, one of ordinary skill would be motivated to use Sun's teachings for microcontrollers, with a USB microcontroller, so that one could update data and software when needed after microcontroller manufacture as taught by Sun (p. 4, lines 6-9).

21. As to claim 6, Sun taught the apparatus according to claim 1, wherein said input pins are configured as data inputs (p. 6, lines 10-28, p. 9, lines 12-21, and p. 11, lines 9-14). Sun did not specifically teach an input pin configured as a serial shift register clock. However, for a serial

Art Unit: 2183

input port/pin such as Sun taught (p. 5, line 25 through p. 6, line 2), the examiner takes Official Notice of the fact that one of the common methods for inputting and outputting of data using a serial port is to use a shift register to accept data from the port and drive data out. One of ordinary skill would, therefore, be motivated to utilize a shift register clock pin as one of the pins of Sun's system when the programming data was serial in nature, as part of a well-known and readily-implemented interface for the programming data.

22. Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun et al. (WO 98/19234) in view of Schmidt (US 2002/0196029 A1).

23. As to claim 4, Sun taught the apparatus according to claim 2, wherein said microcontroller (such as in wireless communications devices, p. 16, lines 5-8) is configured to be programmed (see paragraphs 4 and 5, *supra*). He did not specifically teach said microcontroller programmed with dedicated test or calibration programs which are over-written at said final stage.

24. However, Schmidt taught it was known to program such microcontrollers with calibration and testing programs and that one of ordinary skill in the art is motivated to overwrite the testing programs after testing with other operating software for the device so the device has no unnecessary test overhead (p. 4, paragraphs 32-34).

25. As to claim 8, it fails to teach or define over rejected claim 4.

26. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

27. Pyle et al. (Patent No. 5,467,286).

28. Siu et al. (Patent No. 5,452,339).

Art Unit: 2183

29. Balbinot (Patent No. 5,590,273).

30. Tsai (Patent No. 6,009,496).

31. Any inquiry concerning this communication should be directed to William M. Treat at telephone number 703 305 9699. After Oct. 12, 2004, the examiner's phone number should be changed to (571) 272-4175. The examiner works at home on Wednesdays but may normally be reached on Wednesdays by leaving a voice message using his office phone number. The examiner also works a flexible schedule but may normally be reached in the afternoon and evening on three of the four remaining weekdays.

32. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



WILLIAM M. TREAT
PRIMARY EXAMINER